In The Specification

Paragraph 0011 of the published patent application:

[0011] An important feature of the invention ~~as defined in claim 1~~ concerns a stencil printing machine having a printing section composed of a rotary printing drum with an outer circumferential periphery to which a stencil sheet is mounted and a rotary press member which is moveable between a pressurized position to be pressed against the outer circumferential periphery of said printing drum and a separated position to be separated from the outer circumferential periphery of said printing drum, and a paper feed section for feeding print medium between said printing drum and said rotary press member, wherein print medium, fed from the paper feed section, is pressed between and transferred by said printing drum and said rotary press member both of which are rotated together, and during such a pressurized and transfer movement of print medium, print medium is transferred with ink to perform a printing operation, and wherein the stencil printing machine comprises said rotary press member including an outer circumferential periphery formed with micro-convexities and micro-concavities.

Paragraphs 0013 – 0043 of the published patent application:

[0013] Another important feature of the invention ~~as defined in claim 2~~ concerns the stencil printing machine wherein said micro-convexities and said micro-concavities of the outer circumferential periphery of said rotary press member has a depth of a value above 0.035 mm.

[0014] With such a stencil printing machine, the effect of the invention ~~defined in claim 1~~ is obtained and, in addition, when the rotary press member presses the printing drum via print medium, there is a big difference in level in the convexities and the concavities to interrupt the

concavities from being practically brought into contact with non-fixed ink of print medium, thereby adequately minimizing transfer of non-fixed ink to the rotary press member.

[0015] Another important feature of the invention ~~as defined in claim 3~~ concerns the stencil printing machine wherein said micro-convexities and said micro-concavities of the outer circumferential periphery of said rotary press member has a depth of a value above 0.044 mm.

[0016] With such a stencil printing machine, the effect of the invention ~~defined in claim 1~~ is obtained and, in addition, when the rotary press member presses the printing drum via print medium, there is an adequately big difference in level in the convexities and the concavities such that the concavities have little or no contact with non-fixed ink of print medium, thereby further minimizing transfer of non-fixed ink to the rotary press member.

[0017] Another important feature of the invention ~~as defined in claim 4~~ concerns the stencil printing machine ~~defined in claims 1 to 3~~ wherein a distance between apexes of said micro-convexities and said micro-concavities of the outer circumferential periphery of said rotary press member has a value below 0.64 mm.

[0018] With such a stencil printing machine, the effects of the invention ~~defined in claims 1 to 3~~ is obtained and, in addition, when the rotary press member presses the printing drum via print medium, there is a narrow distance between the convexities and the concavities formed over the outer circumferential periphery of the rotary press member, interrupting the print image from appearing a visible convexity and concavity pattern.

[0019] Another important feature of the invention ~~as defined in claim 5~~ concerns the stencil printing machine ~~defined in any one of preceding claims 1 to 4~~ wherein said micro-convexities and said micro-concavities of the outer circumferential periphery of said rotary press member are composed of point-like convexities and concavities.

[0020] With such a stencil printing machine, the effects of the invention ~~as defined in claims 1 to 4~~ are obtained and, in addition, the convexities and the concavities can be uniformly formed in either direction over the outer circumferential periphery of the rotary press member.

[0021] Another important feature of the invention ~~as defined in claim 6~~ concerns the stencil printing machine ~~defined in any one of preceding claims 1 to 4~~ wherein said micro-convexities and said micro-concavities of the outer circumferential periphery of said rotary press member are composed of line-shaped convexities and concavities which are orientated in the same direction as that which print medium is transferred.

[0022] With such a stencil printing machine, the effects of the invention ~~as defined in claims 1 to 4~~ are obtained and, in addition, the convexities and the concavities can be regularly and distinctly formed over the outer circumferential periphery of the rotary press member in a direction perpendicular an axial direction thereof.

[0023] Another important feature of the invention ~~as defined in claim 7~~ concerns the stencil printing machine ~~defined in claim 5~~ wherein said micro-convexities and said micro-concavities of the outer circumferential periphery of said rotary press member are formed by locating a screen mesh to a surface of said rotary press member.

[0024] With such a stencil printing machine, the effect of the invention ~~as defined in claim 5~~ is obtained and, in addition, the screen mesh per se is individually prepared whereupon the screen mesh is located over the outer circumferential periphery of the rotary press member by covering or by adhering for thereby enabling formation of the micro-convexities and the micro-concavities.

[0025] Another important feature of the invention ~~as defined in claim 8~~ concerns the stencil printing machine ~~defined in claim 5~~ wherein said point-like micro-convexities and micro-concavities of the outer circumferential periphery of said rotary press member are formed by locating a large number of spherical bodies to a surface of said rotary press member.

[0026] With such a stencil printing machine, the effect of the invention ~~as defined in claim 5~~ is obtained and, in addition, the large number of spherical bodies per se are individually prepared whereupon the spherical bodies are located over the outer circumferential periphery of the rotary press member by adhesion for thereby enabling formation of the micro-convexities and the micro-concavities.

[0027] Another important feature of the invention ~~as defined in claim 9~~ concerns the stencil printing machine, ~~defined in claim 1,~~ which further comprises a liquid application unit for applying liquid to the outer circumferential periphery of said rotary press member.

[0028] With such a stencil printing machine, the effect of the invention ~~as defined in claim 1~~ is obtained and, in addition, during separating movement between the rotary press member and

print medium, a non-fixed ink area is not split whereas a liquid area is split, thereby preventing non-fixed ink from being adhered to the rotary press member.

[0029] Another important feature of the invention ~~as defined in claim 10~~ concerns the stencil printing machine, ~~defined in claim 9,~~wherein said liquid has a viscosity of a value below 1000 millipascal · second (mPa·s).

[0030] With such a stencil printing machine, the effect of the invention ~~as defined in claim 9~~ is obtained and, in addition, during separating movement between the rotary press member and print medium, the liquid area, which has the low viscosity, is reliably split, thereby preventing non-fixed ink from being adhered to the rotary press member.

[0031] Another important feature of the invention ~~as defined in claim 11~~ concerns the stencil printing machine, ~~defined in claim 9,~~ wherein said liquid has a viscosity of a value below 500 millipascal · second (mPa·s).

[0032] With such a stencil printing machine, the effect of the invention ~~as defined in claim 9~~ is obtained and, in addition, during separating movement between the rotary press member and print medium, the liquid area, which has the lower viscosity, is more reliably split, thereby preventing non-fixed ink from being adhered to the rotary press member.

[0033] Another important feature of the invention ~~as defined in claim 12~~ concerns the stencil printing machine, ~~defined in claims 9 to 11,~~ wherein said liquid is composed of silicone oil.

[0034] With such a stencil printing machine, the effects of the invention ~~as defined in claims 9 to 11~~ are obtained with the use of silicone oil.

[0035] Another important feature of the invention ~~as defined in claim 13~~ concerns the stencil printing machine, ~~defined in claim 9,~~ wherein said liquid application unit comprises a rotary liquid application roller held in pressured contact with said rotary press member, and a liquid supply unit for supplying liquid to an outer circumferential periphery of said liquid application roller, wherein said liquid application roller is rotatable with said rotary press member to apply liquid, supplied by said liquid supply unit, to the outer circumferential periphery of said rotary press member.

[0036] With such a stencil printing machine, the effect of the invention ~~as defined in claim 9~~ is obtained and, in addition, the liquid application roller rotates with the rotary press member to apply liquid to the rotary press member.

[0037] Another important feature of the invention ~~as defined in claim 14~~ concerns the stencil printing machine, ~~defined in claim 9,~~ wherein said liquid application unit comprises a sheet-like member held in abutting contact with said rotary press member and impregnated with liquid, said sheet-like member being moveable while held in abutting contact with said rotary press member.

[0038] With such a stencil printing machine, the effect of the invention ~~as defined in claim 9~~ is obtained and, in addition, the sheet-like member, impregnated with liquid, enables to be brought into abutting contact with the rotary press member at variable positions.

[0039] Another important feature of the invention ~~as defined in claim 15~~ concerns the stencil printing machine, ~~defined in claim 9,~~ wherein said liquid application unit comprises a biasing member held in abutting contact with said rotary press member and impregnated with liquid which is retained in said biasing member, and a liquid supply unit for supplying liquid to the outer circumferential periphery of said rotary press member at a point upstream of said biasing member in a direction which said rotary press member rotates.

[0040] With such a stencil printing machine, the effect of the invention ~~as defined in claim 9~~ is obtained and, in addition, liquid is first supplied to the rotary pres member with the liquid supply unit and is then smoothly applied over the outer circumferential periphery of the rotary press member with the biasing member, enabling adjustment of the amount of liquid to be applied to the rotary press member with the liquid supply unit.

[0041] Another important feature of the invention ~~as defined in claim 16~~ concerns the stencil printing machine, ~~defined in claim 9,~~ wherein said liquid application unit comprises a sheet-like member held in abutting contact with said rotational press member at an adjustable contact area and moveable to vary the position of said adjustable contact area, and a liquid supply unit for supplying liquid to the outer circumferential periphery of said rotary press member at a point upstream of said adjustable contact area of said sheet-like member in a direction which said rotary press member rotates.

[0042] With such a stencil printing machine, the effect of the invention ~~as defined in claim 9~~ is obtained and, in addition, liquid is first supplied to the rotary pres member with the liquid supply unit and is then smoothly applied over the outer circumferential periphery of the rotary press

member with the sheet-like member which can be brought into abutting contact with the rotary press member at variable positions, thereby enabling adjustment of the amount of liquid to be applied to the rotary press member with the liquid supply unit.

[0043] Another important feature of the invention ~~as defined in claim 17~~ concerns the stencil printing machine which has two sets of printing sections located at an upstream side and a downstream side, respectively, and each composed of a rotary printing drum with an outer circumferential periphery to which a stencil sheet is mounted and a rotary press member which is movable between a pressurized position to be pressed against the outer circumferential periphery of the printing drum and a separated position to be separate from the outer circumferential periphery, a paper feed section for feeding print medium to the printing section at the upstream side, and an upstream transfer mechanism for transferring and feeding print medium, discharged from the printing section at the upstream side, to the printing section at the downstream side, wherein print medium, fed from the paper feed section to the printing section at the upstream side, is pressed between and transferred by the printing drum at the upstream side and the rotary press member both of which are rotated together, and during such a pressurized and transfer movement of print medium, one surface of print medium is transferred with ink and print medium is then fed to the printing section at the downstream side with the upstream transfer mechanism to allow print medium to be pressurized between and transferred by the printing drum and the rotary press member at the downstream side such that during such a pressurized and transfer movement, the other surface of print medium is transferred with ink to perform a double-phase printing operation, and which comprises at least said rotary press member, located at the downstream side, including an outer circumferential periphery formed with micro-convexities and micro-concavities.

Paragraphs 0045 – 0056 of the published patent application:

[0045] Another important feature of the invention ~~as defined in claim 18~~ concerns the stencil printing machine wherein said micro-convexities and said micro-concavities of the outer circumferential periphery of said rotary press member has a depth of a value above 0.035 mm.

[0046] With such a stencil printing machine, the effect of the invention ~~defined in claim 17~~ is obtained and, in addition, when the rotary press member presses the printing drum via print medium, there is a big difference in level in the convexities and the concavities to interrupt the concavities from being practically brought into contact with non-fixed ink of print medium, thereby adequately minimizing transfer of non-fixed ink to the rotary press member.

[0047] Another important feature of the invention ~~as defined in claim 19~~ concerns the stencil printing machine wherein said micro-convexities and said micro-concavities of the outer circumferential periphery of said rotary press member has a depth of a value above 0.044 mm.

[0048] With such a stencil printing machine, the effect of the invention ~~defined in claim 17~~ is obtained and, in addition, when the rotary press member presses the printing drum via print medium, there is an adequately big difference in level in the convexities and the concavities such that the concavities have little or no contact with non-fixed ink of print medium, thereby further minimizing transfer of non-fixed ink to the rotary press member.

[0049] Another important feature of the invention ~~as defined in claim 20~~ concerns the stencil printing machine ~~defined in claims 17 to 19~~ wherein a distance between apexes of said micro-

convexities and said micro-concavities of the outer circumferential periphery of said rotary press member has a value below 0.64 mm.

[0050] With such a stencil printing machine, the effects of the invention ~~defined in claims 17 to 19~~ is obtained and, in addition, when the rotary press member presses the printing drum via print medium, there is a narrow distance between the convexities and the concavities formed over the outer circumferential periphery of the rotary press member, interrupting the print image from appearing a visible convexity and concavity pattern.

[0051] Another important feature of the invention ~~as defined in claim 21~~ concerns the stencil printing machine ~~defined in any one of preceding claims 17 to 20~~ wherein said micro-convexities and said micro-concavities of the outer circumferential periphery of said rotary press member are composed of point-like convexities and concavities.

[0052] With such a stencil printing machine, the effects of the invention ~~as defined in claims 17 to 20~~ are obtained and, in addition, the convexities and the concavities can be uniformly formed in either direction over the outer circumferential periphery of the rotary press member.

[0053] Another important feature of the invention ~~as defined in claim 22~~ concerns the stencil printing machine ~~defined in any one of preceding claims 17 to 20~~ wherein said micro-convexities and said micro-concavities of the outer circumferential periphery of said rotary press member are composed of line-shaped convexities and concavities which are orientated in the same direction as that which print medium is transferred.

[0054] With such a stencil printing machine, the effects of the invention ~~as defined in claims 17 to 20~~ are obtained and, in addition, the convexities and the concavities can be regularly and distinctly formed over the outer circumferential periphery of the rotary press member in a direction perpendicular an axial direction thereof.

[0055] Another important feature of the invention ~~as defined in claim 23~~ concerns the stencil printing machine, ~~defined in claim 17,~~ which further comprises a liquid application unit for applying liquid to the outer circumferential periphery of said rotary press member.

[0056] With such a stencil printing machine, the effect of the invention ~~as defined in claim 17~~ is obtained and, in addition, during separating movement between the rotary press member and print medium, a non-fixed ink area is not split whereas a liquid area is split, thereby preventing non-fixed ink from being adhered to the rotary press member.

In paragraphs 141 – 156 of the published patent application:

[0141] As previously described above, in accordance with the stencil printing machine according to the invention, ~~as defined in claim 1,~~ wherein ink is transferred to print medium during the transfer stage in pressured contact thereof to perform the printing operation, the presence of the micro-convexities and concavities formed over the outer circumferential periphery of the rotary press member allows the outer circumferential periphery of the rotary press member to be merely formed with the micro-convexities and concavities such that even when the rotary press member is directly urged toward the stencil sheet, there is a few contact area between the rotary press member and ink or there is a few contact area between the outer circumferential periphery of the rotary press member and the non-fixed ink side of the printing medium. Accordingly, when the

rotary press member is separated from the stencil sheet or when the rotary press member is separated from the printing medium, since the aforementioned ink or the non-fixed ink are not appreciably adhered to the rotary press member, it is possible for the printing medium to be prevented from being contaminated in a simplified structure with little decrease in the print density of printing medium.

[0142] In accordance with the invention ~~as defined in claim 2~~, the presence of the convexities and concavities with the depth of the value above 0.035 mm formed at the outer circumferential periphery of the rotary press member allows the outer circumferential periphery of the rotary press member to have an increased difference in level in the convexities and the concavities of the outer circumferential periphery of the rotary press member when the rotary press member presses the printing drum via print medium. Thus, the concavities can not be nearly brought into contact with non-fixed ink of print medium for adequately precluding the transfer of non-fixed ink to the rotary press member, ensuring the visible contamination of print medium in a more reliable manner.

[0143] In accordance with the invention ~~as defined in claim 3~~, the presence of the convexities and concavities with the depth of the value above 0.044 mm formed at the outer circumferential periphery of the rotary press member allows the outer circumferential periphery of the rotary press member to have an increased difference in level in the convexities and the concavities of the outer circumferential periphery of the rotary press member when the rotary press member presses the printing drum via print medium. This allows the concavities to remain in little or no contact with non-fixed ink and the transfer of non-fixed ink to the rotary press member can be adequately minimized, ensuring the visible contamination of print medium in a more reliable

manner.

[0144] In accordance with the invention ~~as defined in claim 4~~, the presence of the convexities and concavities, with the distance between the apexes in the range below 0.64 mm, formed at the outer circumferential periphery of the rotary press member allows the distance between the convexities and the concavities formed at the outer circumferential periphery of the rotary press member to have a narrow value when the rotary press member presses the printing drum via print medium to interrupt a visible convexity and concavity pattern from appearing on the print image, with a resultant image in a high quality.

[0145] In accordance with the invention ~~as defined in claim 5~~, the presence of the convexities and the concavities, composed of the point-like convexities and concavities, of the outer circumferential periphery of the rotary press member allows the outer circumferential periphery of the rotary press member to be substantially equally formed with the convexities and the concavities in any direction, thereby precluding ink transfer in a substantially equal fashion in whole directions.

[0146] In accordance with the invention ~~as defined in claim 6~~, the presence of the convexities and the concavities, composed of the line-shaped convexities and concavities orientated in the same direction as that which print medium is transferred, of the outer circumferential periphery of the rotary press member allows the outer circumferential periphery of the rotary press member to be regularly formed with definite convexities and the concavities in a direction perpendicular to the axial direction of the outer circumferential periphery of the rotary press member, thereby reliably preventing ink transfer in the direction perpendicular to the orientated direction of the

line-shape.

[0147] In accordance with the invention ~~as defined in claim 7~~, the presence of the convexities and the concavities including the point-like convexities and concavities, composed of the screen mesh, of the outer circumferential periphery of the rotary press member allows the screen mesh per se to be individually prepared which is located over the outer circumferential periphery of the rotary press member by covering the same with the mesh screen or by adhering the screen mesh to the same to form the micro-convexities and concavities, providing an ease of preparation of the point-like convexities and concavities.

[0148] In accordance with the invention ~~as defined in claim 8~~, the presence of the convexities and the concavities including the point-like convexities and concavities, composed of the large number of spherical bodies, of the outer circumferential periphery of the rotary press member allows the large number of spherical bodies per se to be individually prepared which are located over the outer circumferential periphery of the rotary press member by adhesion to form the micro-convexities and the micro-concavities, providing an ease of preparation of the point-like convexities and concavities.

[0149] In accordance with the invention ~~as defined in claim 9~~, the presence of the liquid application unit, which applies liquid over the outer circumferential periphery of the rotary press member, prevents a non-fixed ink portion from being split while allowing a liquid portion to be split, when the pressurized rotational member and print medium are separated from one another, for thereby precluding the rotary press member from being adhered with non-fixed ink, substantially completely avoiding print medium from being contaminated.

[0150] In accordance with the invention ~~as defined in claim 10~~, the presence of liquid with the viscosity of a value below 1000 millipascal · second allows the liquid portion to be reliably split when the rotary press member and print medium are separated from one another to interrupt non-fixed ink from being adhered to the rotary press member for thereby completely preventing the contamination of print medium.

[0151] In accordance with the invention ~~as defined in claim 11~~, the presence of liquid with the viscosity of a value below 500 millipascal · second allows the liquid portion to be reliably split when the rotary press member and print medium are separated from one another to interrupt non-fixed ink from being adhered to the rotary press member for thereby completely preventing the contamination of print medium.

[0152] In accordance with the invention ~~as defined in claim 12~~, the presence of liquid composed of silicone oil allows the advantages of the invention ~~of claims 10 to 12~~ to be obtained.

[0153] In accordance with the invention ~~as defined in claim 13~~, the liquid application roller rotates with the rotary press member to apply liquid over the rotary press member with little rotational load to be exerted thereto.

[0154] In accordance with the invention ~~as defined in claim 14~~, since the sheet-like member, impregnated with liquid, can be brought into pressured contact with the rotary press member at adjustable contact positions, gradually varying the contact positions at which the rotary press member is held in contact enables liquid to be applied to the rotary press member in a uniform

fashion.

[0155] In accordance with the invention ~~as defined in claim 15~~, the presence of the liquid supply unit, which can adjust the amount of liquid to be applied to the rotary press member, allows the amount of liquid to be adjusted to a value optimum for avoiding ink transfer according to the printing conditions, etc.

[0156] In accordance with the invention ~~as defined in claim 16~~, since liquid, which is supplied to the rotary press member from the liquid supply unit, is completely applied to the outer circumferential periphery of the rotary press member with the sheet-like member, it is possible for the point of the sheet-like member, with which the rotary press member is held in abutting contact, to be varied while enabling adjustment of the amount of liquid to be applied to the rotary press member by means of the liquid supply unit.

In paragraphs 158 – 164 of the published patent application:

[0158] In accordance with the stencil printing machine according to the invention, ~~as defined in claim 17,~~ wherein the stencil printing machine has two sets of printing sections at the upstream side and the downstream side to perform the double-phase printing operation, the presence of the micro-convexities and the micro-concavities formed over the outer circumferential periphery of at least the downstream rotary press member allows the outer circumferential periphery of the downstream rotary press member to be merely formed with the micro-convexities and concavities such that there is little contact area between the outer circumferential periphery of the downstream rotary press member and the non-fixed ink side surface of the printing medium. Accordingly, when the rotary press member is separated from printing medium, since the rotary

press member is not appreciably adhered with non-fixed ink, it is possible for the printing medium to be prevented from being contaminated in a simplified structure with little decrease in the print density of printing medium.

[0159] In accordance with the invention ~~as defined in claim 18~~, the presence of the convexities and concavities with the depth of the value above 0.035 mm formed at the outer circumferential periphery of the rotary press member allows the outer circumferential periphery of the rotary press member to have an increased difference in level in the convexities and the concavities of the outer circumferential periphery of the rotary press member when the rotary press member presses the printing drum via print medium. Thus, the concavities can not be nearly brought into contact with non-fixed ink of print medium for adequately precluding the transfer of non-fixed ink to the rotary press member, ensuring the visible contamination of print medium in a more reliable manner.

[0160] In accordance with the invention ~~as defined in claim 19~~, the presence of the convexities and concavities with the depth of the value above 0.044 mm formed at the outer circumferential periphery of the rotary press member allows the outer circumferential periphery of the rotary press member to have an increased difference in level in the convexities and the concavities of the outer circumferential periphery of the rotary press member when the rotary press member presses the printing drum via print medium. This allows the concavities to remain in little or no contact with non-fixed ink and the transfer of non-fixed ink to the rotary press member can be adequately minimized, ensuring the visible contamination of print medium in a more reliable manner.

[0161] In accordance with the invention ~~as defined in claim 20~~, the presence of the convexities and concavities, with the distance between the apexes in the range below 0.64 mm, formed at the outer circumferential periphery of the rotary press member allows the distance between the convexities and the concavities formed at the outer circumferential periphery of the rotary press member to have a narrow value when the rotary press member presses the printing drum via print medium to interrupt a visible convexity and concavity pattern from appearing on the print image, with a resultant image in a high quality.

[0162] In accordance with the invention ~~as defined in claim 21~~, the presence of the convexities and the concavities, composed of the point-like convexities and concavities, of the outer circumferential periphery of the rotary press member allows the outer circumferential periphery of the rotary press member to be substantially equally formed with the convexities and the concavities in any direction, thereby precluding ink transfer in a substantially equal fashion in whole directions.

[0163] In accordance with the invention ~~as defined in claim 22~~, the presence of the convexities and the concavities, composed of the line-shaped convexities and concavities orientated in the same direction as that which print medium is transferred, of the outer circumferential periphery of the rotary press member allows the outer circumferential periphery of the rotary press member to be regularly formed with definite convexities and the concavities in a direction perpendicular to the axial direction of the outer circumferential periphery of the rotary press member, thereby reliably preventing ink transfer in the direction perpendicular to the orientated direction of the line-shape.

[0164] In accordance with the invention ~~as defined in claim 23~~, the presence of the liquid application unit, which applies liquid over the outer circumferential periphery of the rotary press member, prevents a non-fixed ink portion from being split while allowing a liquid portion to be split, when the pressurized rotational member and print medium are separated from one another, for thereby precluding the rotary press member from being adhered with non-fixed ink, substantially completely avoiding print medium from being contaminated.

In the Drawings:

Please enter replacement sheets of the drawings of Figs. 1 – 2, which are attached herewith.